

Big Game Road Kill Fatality Report

Year	1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Total
	Employee Killed	Other Killed							
1997									
Deer	0	0	0	0	0	0	0	0	0
Elk	0	0	0	0	0	0	0	0	0
1998									
Deer	0	0	0	0	0	0	0	0	0
Elk	0	0	0	0	0	0	0	0	0
1999									
Deer	0	0	0	0	0	0	0	0	0
Elk	0	0	0	0	0	0	0	0	0
2000									
Deer	0	0	0	0	0	0	0	2	2
Elk	0	0	0	0	0	0	0	0	0
2001									
Deer	1	0	0	0	0	0	0	0	1
Elk	0	0	0	0	0	0	0	0	0
2002									
Deer	0	0	0	0	0	0	0	0	0
Elk	0	0	0	0	0	0	0	0	0
2003									
Deer	0	0	0	0	0	0	0	0	0
Elk	0	0	0	0	0	0	0	0	0

* - Totals verified by Derris Jones - DWR (Habitat Manager) 11/08/00

**HORIZON MINE DISCHARGE
2003**

<u>DATE</u>	<u>GALLONS PUMPED</u>	<u>MINUTES</u>	<u>AVERAGE G.P.M.</u>			
02-Jan-03						
03-Feb-03	13027800	44640	291.84			
28-Feb-03	9515000	36000	264.31			
31-Mar-03	11761000	44640	263.46			
29-Apr-03	10635400	41760	254.68			
30-May-03	11625200	46080	252.28			
23-Jun-03	13007800	34560	376.38			
31-Jul-03	12478000	54720	228.03			
19-Aug-03	6713700	27360	245.38			
02-Sep-03	7181600	20160	356.23			
30-Sep-03	11399900	40320	282.74			
21-Oct-03	8501600	30240	281.14			
11-Nov-03	8018800	30240	265.17			
09-Dec-03	11809500	40320	292.89			
06-Jan-04	14137700	40320	350.64	149813000	531360	281.9426

**NORTH FORK GORDON CREEK
MACROINVERTEBRATE
SAMPLING RESULTS
FROM SPRING, 2003**

Submitted to:

Hidden Splendor Resources, Inc.
Horizon Mine
12530 Consumer Road
Helper, Utah 84526

Submitted by:

JBR Environmental Consultants, Inc.
8160 South Highland Drive
Sandy, UT 84093

October 2003

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NORTH FORK GORDON CREEK MACROINVERTEBRATE SAMPLING RESULTS FROM SPRING, 2003

1.0 Introduction

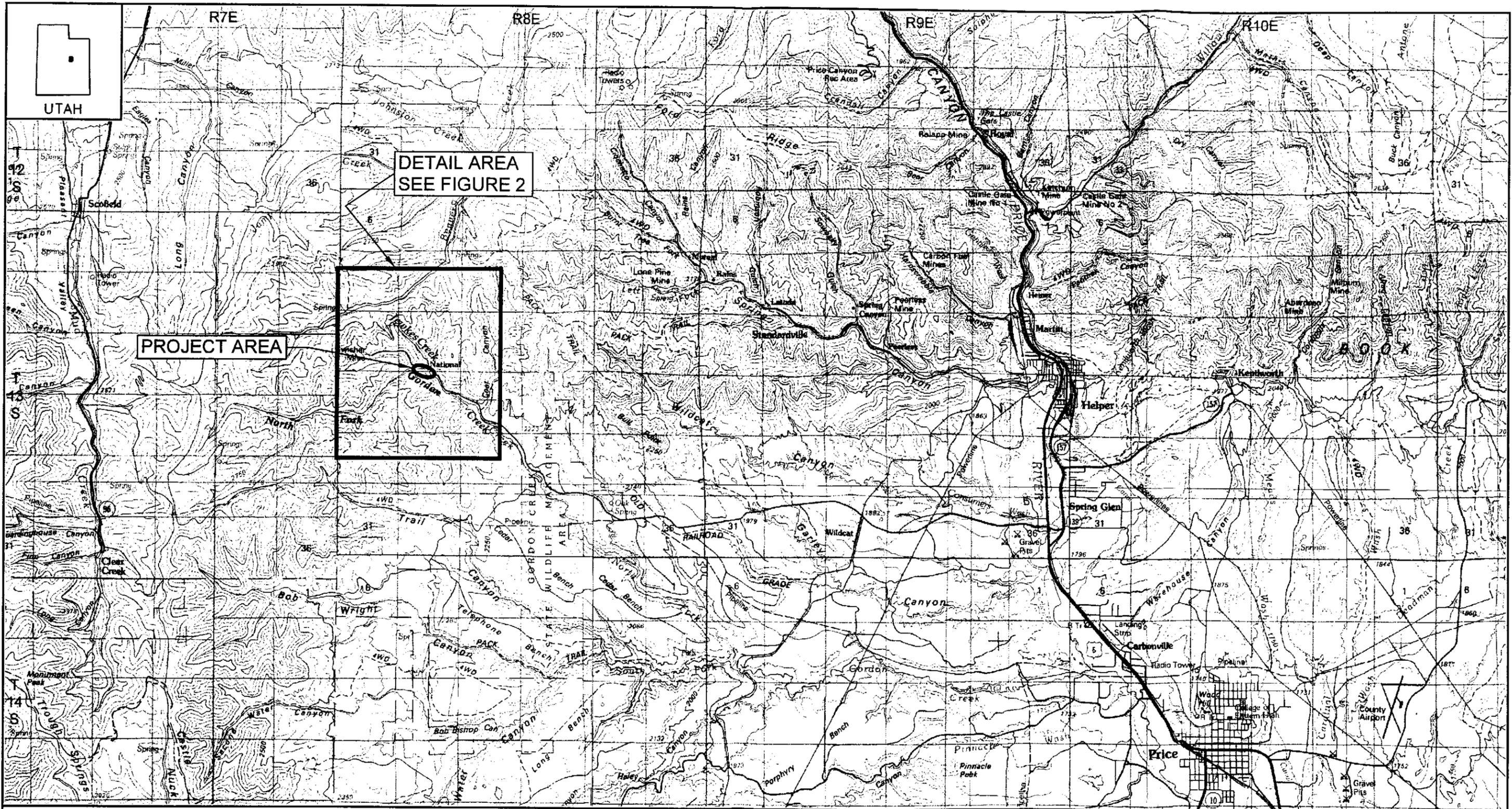
The Hidden Splendor Mine is located south of Scofield, Utah (Figure 1), and its surface facilities are in the Jewkes Creek watershed. Jewkes Creek is tributary to North Fork Gordon Creek. As described in more detail in a previous report (JBR, 2001), the Jewkes Creek watershed is also subject to non-mining land uses including grazing and logging. The Hidden Splendor Mine discharges pumped groundwater into Jewkes Creek, approximately 0.5 road miles upstream of Jewkes Creek's confluence with North Fork Gordon Creek.

In the spring of 2001, Utah Division of Oil, Gas, and Mining (UDOGM) requested that a former operator of the coal mine initiate a macroinvertebrate data collection program that could be used to track temporal and spatial differences in habitat quality in North Fork Gordon Creek above and below its confluence with Jewkes Creek. Hidden Splendor has taken on the study as a condition of its mining permit. JBR Environmental Consultants (JBR) was hired originally to conduct the study, and UDOGM provided input on sampling locations and study design. JBR is continuing to conduct the study on Hidden Splendor's behalf.

Station 1 is located on North Fork Gordon Creek approximately 0.2 road miles upstream from the confluence of Jewkes Creek and Gordon Creek. Station 2 is located on North Fork Gordon Creek approximately 0.1 road miles downstream from the confluence of Jewkes Creek and Gordon Creek (Figure 2). Sites are sampled biannually, in spring and fall.

JBR first sampled the two chosen study sites on May 31, 2001, and prepared a report for the mine operator at that time (JBR, 2001). That sampling showed slightly better habitat conditions at the upstream site than the downstream site (JBR, 2001). Since that time, repeat sampling has shown either somewhat better conditions at the upstream site, or that the sites were essentially equal in condition.

The two sites were most recently sampled on June 19, 2003; results are discussed in this report.



BASE: NEPHI AND PRICE, 1:100,000 USGS MAPS

**HIDDEN SPLENDOR RESOURCES, INC.
HORIZON MINE**

**FIGURE 1
PROJECT LOCATION MAP**



jbr
environmental consultants, inc.

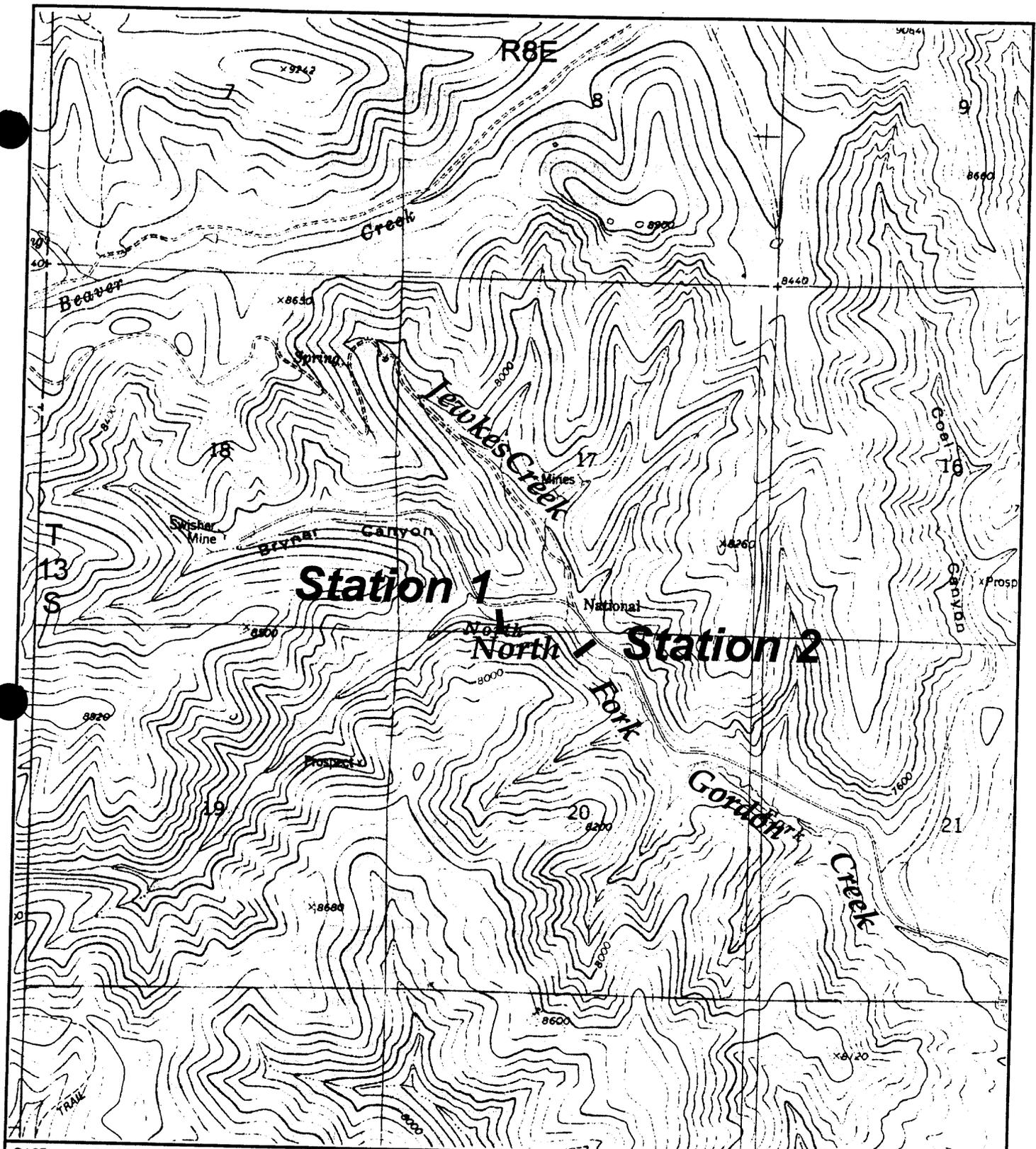
200 Lake City, Utah Cedar City, Utah Bann, Nevada Elko, Nevada Boise, Idaho

DESIGN BY MJ DRAWN BY CP CH'D BY SCALE 1:100,000

DATE DRAWN 10/4/01

REVISION

LODESTAR\Loadstar1-2.dwg



BASE: JUMP CREEK, UTAH, USGS 7.5' TOPO, 1979

**HIDDEN SPLENDOR RESOURCES, INC.
HORIZON MINE**

**FIGURE 2
SITE MAP - MACRO INVERTEBRATE
SAMPLING LOCATIONS**

2000 0 2000 FEET



Jbr
environmental consultants, inc.
Salt Lake City, Utah Cedar City, Utah Reno, Nevada Elko, Nevada Delta, Idaho

DESIGN BY MJ DRAWN BY CP CH'D BY gy SCALE 1" = 2000'

DATE DRAWN 8/23/01

REVISION

LODESTAR\j\star1-1.dwg

2.0 Methods

The June 2003 macroinvertebrate sampling was conducted using the same methods as were used previously (JBR, 2001). Three separate sub-samples, or replicates, were collected at each station. A modified Surber sampler was placed in riffle areas in midstream flow at each site. After processing the substrate within the confines of the sampler, the contents of the net were transferred to a pan, debris was removed, a salt solution was used to wash the sample. The sample was then placed in a preserved bottle and transported to the entomology laboratory at Brigham Young University, where the macroinvertebrates were sorted, identified, counted and analyzed under the supervision of Dr. Richard W. Baumann.

3.0 Results

The entomology lab at Brigham Young University prepared a written report based upon their analyses of the submitted samples (Baumann, 2003). Several types of information were derived from the samples and were reported in tabular form in Baumann's report; these tables are contained in Appendix A. A complete list of taxa found at each station was prepared, including total numbers, biomass, and density (numbers/square meter). Further, species were categorized according to their trophic level (scrapers, shredders, collectors, filter feeders, and predators) and their tolerance quotient. The number of taxa (or richness) also relates to community composition (or diversity), and the Shannon-Weaver Diversity Index was used to indicate diversity. Data from Baumann's report are summarized below, and discussions of these data follow.

SUMMARY INFORMATION OF DATA FROM BAUMANN'S REPORT

Parameter	Stations	
	1	2
Total number of taxa	15	14
Density (mean number/square meter)	936	1403
Biomass (grams/square meter)	0.4	2.6
(Diversity) Shannon Weaver Index = d	2.8	2.5
Average Community Tolerance Quotient=CTQa	62	65
Predicted Community Tolerance Quotient = CTQp	60	60
Percent of Predicted = BCI	97	92

As shown in the above summary table, the upstream site shows slightly greater diversity than the downstream site, however a statistical difference may not be verifiable. Baumann (2003) points out that two relatively sensitive mayfly genera that are present at Station 1 are absent in Station 2 samples, in spite of the apparent high quality at both sites. Appendix A provides the data upon which his statements are based.

Various tolerance quotients were also derived from the sample data. A tolerance quotient relates to the ability of a given species to withstand stressors such as poor water quality, high sediment levels, and extremes in water temperature; taxa have differing abilities to respond to various stressors or environmental conditions. Species with low tolerances are considered to be more fragile taxa, and can typically only be found in locations with relatively high quality that do not have environmental stressors present. The Actual Community Tolerance Quotients (CTQa) given above are simply arithmetic means of the tolerance quotients of the sampled macroinvertebrates. The upstream site had a CTQa of 62, and the downstream site had a value of 65. The downstream site improved over the previous sampling event, when the CTQa was reported at 79.

Still another measurement, the predicted Community Tolerance Quotient (CTQp), is the mean of the tolerance quotients for a predicted macroinvertebrate community, and represents the ideal tolerance quotient mean for a community in a given area. The ratio of the CTQp to the CTQa is known as the Biotic Condition Index, or BCI. It provides an indication of how close to its potential a particular stream site is, given the existing stream and watershed conditions. BCIs of 97 and 92 for the upstream and downstream sites, respectively, both indicate excellent habitat conditions, and showed increases over the October 2002 sampling results.

Overall, the data described above indicates similar habitat quality at the two sites, with the upstream site perhaps slightly better when compared to the downstream site. This is generally consistent with the data set as a whole over the past two-plus years, however more definitive conclusions and trends may be apparent if a more complete statistical assessment of the data were made.

4.0 Summary

The June 2003 macroinvertebrate sampling at two sites on North Fork Gordon Creek appears to show similar habitat quality at the two sites, with the upstream site perhaps slightly better when compared to the downstream site. Future sampling will provide additional data to further characterize the macroinvertebrate communities at these two locations.

5.0 References

Baumann, Richard W., September 2003. *Macroinvertebrate Studies on Gordan Creek, West of Helper, Carbon County, Utah - Samples Collected June 19, 2003*. Department of Zoology, Brigham Young University, Provo, Utah. Prepared for, and submitted to, JBR Environmental Consultants.

JBR Environmental Consultants, October 8, 2001. *North Fork Gordon Creek Macroinvertebrate Sampling Results From Spring, 2001*.

Appendix A

Data Tables From Baumann's Report

Table 1. Macroinvertebrates obtained from North Fork, Gordon Creek, Carbon County, Utah, samples collected June 19, 2003

Organism	Trophic Level*	Tolerance Quotient	Stations	
			1	2
Ephemeroptera (Mayflies)				
Baetis	C-G	72	50	54
Cinygmula	Scr	30	15	
Epeorus longimanus	Scr	18	10	
Drunella grandis	Shr	32		1
Plecoptera (Stoneflies)				
Isoperla quinquepunctata	Pred	48		1
Amphinemura	C-G	6	1	2
Pteronarcella badia	Shr	30	2	
Trichoptera (Caddisflies)				
Brachycentrus americanus	Scr	54		126
Hydropsyche	C-F	108	25	67
Hesperophylax	Scr	108	6	
Rhyacophila	Pred	30	3	1
Coleoptera (Beetles)				
Elmidae	C-G	104	46	20
Diptera (Flies)				
Chironomidae	C-G	108	87	94
Dicranota	Pred	36	3	2
Empididae	Pred	95		1
Hexatoma	Pred	36	1	3

Table 1 Continued

Organism	Trophic Level*	Tolerance Quotient	Stations	
			1	2
Diptera (Flies) Continued				
Ormosia	Shr	72	2	
Simulidae	C-F	108		3
Tipula	Shr	80	7	16
Crustacea (Scuds)				
Gammarus	C-G	98	3	

*C-F = collectors-filterers
C-G = collectors-gatherers
Pred = predators

Scr = scrapers
Shr = shredders

Table 2. Summary of macroinvertebrate data from North Fork, Gordon Creek, Carbon County, Utah, samples collected June 19, 2003.

Parameter	Stations	
	1	2
Total number of taxa	15	14
Mean number/square meter	936	1403
Standard Deviation	533	284
Grams/square meter	0.4	2.6
Dominance Community TQ=CTQd	70	74
Shannon Weaver Index = d	2.8	2.5
Average Community TQ=CTQa	62	65
Predicted Community TQ = CTQp	60	60
Percent of Predicted = BCI	97	92

BCI

Above 90
80-90
70-80
Below 70

SCALE

Excellent
Good
Fair
Poor

CTQd

Below 60
60-70
70-80
Above 80

SCALE

Excellent
Good
Fair
Poor

TOTAL SAMPLE STATISTICS

STATION: 1

Gordon Creek above Horizon Mine discharge, Carbon County, Utah

DATE: 06 19

03

Repl	Total No. Species	Mean /SQM	Confidence Limits (80 Percent)		Standard Deviation	Percent SE of Mean	Coeff. of Variation	DBAR	CTQA	CTQD
			LL	UL						
3	15	936	357	1516	532.53	32.83	56.87	2.8242	62	70

SPECIES ANALYSIS

STATION: 1

Gordon Creek above Horizon Mine discharge, Carbon County, Utah

DATE: 06 19 03

TAXONOMIC LIST					MEAN	LOG10	LOG10	
CLASS	ORDER	FAMILY	GENUS	SPECIES	N/SQM	N/SQM	TQ	XTQ
INSECTA	EPHEMEROPTERA	HEPTAGENIIDAE	EPEORUS	LONGIMANUS	36	1.555	18	27
INSECTA	EPHEMEROPTERA	HEPTAGENIIDAE	CINYGMULA		54	1.731	30	51
INSECTA	EPHEMEROPTERA	BAETIDAE	BAETIS		179	2.254	72	162
INSECTA	PLECOPTERA	NEMOURIDAE	AMPHINEMURA		4	0.555	6	3
INSECTA	PLECOPTERA	PTERONARCYIDAE	PTERONARCELLA	BADIA	7	0.856	30	25
INSECTA	TRICHOPTERA	HYDROPSYCHIDAE	HYDROPSYCHE		90	1.953	108	210
INSECTA	TRICHOPTERA	RHYACOPHILIDAE	RHYACOPHILA		11	1.032	30	30
INSECTA	TRICHOPTERA	LIMNEPHILIDAE	HESPEROPHYLAX		22	1.333	108	143
INSECTA	COLEOPTERA	ELMIDAE			165	2.218	104	230
INSECTA	DIPTERA	TIPULIDAE	ORMOSIA		7	0.856	72	61
INSECTA	DIPTERA	TIPULIDAE	DICRANOTA		11	1.032	36	37
INSECTA	DIPTERA	TIPULIDAE	HEXATOMA		4	0.555	36	19
INSECTA	DIPTERA	TIPULIDAE	TIPULA		25	1.400	80	111
INSECTA	DIPTERA	CHIRONOMIDAE			312	2.494	108	269
CRUSTACEA	AMPHIPODA	GAMMARIDAE	GAMMARUS		11	1.032	98	101

MEAN BIOMASS GM/SQM: 0.4

TOTALS: 936 2.971

TOTAL SAMPLE STATISTICS

STATION: 2

Gordon Creek below Horizon Mine discharge, Carbon County, Utah

DATE: 06 19

03

Repl	Total No. Species	Mean /SQM	Confidence Limits (80 Percent)		Standard Deviation	Percent SE of Mean	Coeff. of Variation	DBAR	CTQA	CTQD
			LL	UL						
3	14	1403	1086	1720	291.09	11.98	20.75	2.5333	65	74

SPECIES ANALYSIS

STATION: 2 Gordon Creek below Horizon Mine discharge, Carbon County, Utah

DATE: 06 19 03

TAXONOMIC LIST					MEAN	LOG10	LOG10	
CLASS	ORDER	FAMILY	GENUS	SPECIES	N/SQM	N/SQM	TQ	XTQ
INSECTA	EPEMEROPTERA	EPEMERELLIDAE	DRUNELLA	GRANDIS	4	0.555	32	17
INSECTA	EPEMEROPTERA	BAETIDAE	BAETIS		194	2.287	72	164
INSECTA	PLECOPTERA	NEMOURIDAE	AMPHINEMURA		7	0.856	6	5
INSECTA	PLECOPTERA	PERLODIDAE	ISOPERLA		4	0.555	48	26
INSECTA	TRICHOPTERA	HYDROPSYCHIDAE	HYDROPSYCHE		240	2.381	108	257
INSECTA	TRICHOPTERA	RHYACOPHILIDAE	RHYACOPHILA		4	0.555	30	16
INSECTA	TRICHOPTERA	BRACHYCENTRIDAE	BRACHYCENTRUS	AMERICANUS	452	2.655	48	127
INSECTA	COLEOPTERA	ELMIDAE			72	1.856	104	193
INSECTA	DIPTERA	TIPULIDAE	DICRANOTA		7	0.856	36	30
INSECTA	DIPTERA	TIPULIDAE	HEXATOMA		11	1.032	36	37
INSECTA	DIPTERA	TIPULIDAE	TIPULA		57	1.759	80	140
INSECTA	DIPTERA	SIMULIIDAE			11	1.032	108	111
INSECTA	DIPTERA	CHIRONOMIDAE			337	2.528	108	273
INSECTA	DIPTERA	EMPIDIDAE			4	0.555	95	52

MEAN BIOMASS GM/SQM: 0.4 TOTALS: 1403 3.147



July 2, 2003

HIDDEN SPLENDOR RESOURCES INC.
57 WEST 200 SOUTH, SUITE 400
SALT LAKE CITY UT. 84101
DAVID MILLER

ADDRESS ALL CORRESPONDENCE TO:
COMMERCIAL TESTING & ENGINEERING CO.
P.O. BOX 1020
HUNTINGTON, UT 84528
TEL: (435) 653-2311
FAX: (435) 653-2436

Kind of sample Water
reported to us

Sample taken at HORIZON MINE

Sample taken by D. MILLER

Date sampled June 19, 2003

Date received June 19, 2003

Sample identification by
HIDDEN SPLENDOR RESOURCES

ID: MV-1

RECEIVED 1145

SAMPLED 0845

FIELD MEASUREMENTS

FLOW 750 TEMP 10

COND. 440 pH 8.4

D.O. 5

NOTES:

DIS. METALS

FILTERED @ LAB

Page 1 of 1

Analysis report no. 59-25331

Parameter	Result	MRL	Units	Method	Analyzed	
					Date/Time	Analyst
Alkalinity, Bicarbonate	245	5	mg/l as HCO ₃	SM 2320 B	06-24-2003	0730 JJ
Alkalinity, Carbonate	<5	5	mg/l as CO ₃	SM 2320 B	06-24-2003	0730 JJ
Alkalinity, Total	205	5	mg/l as CaCO ₃	SM 2320 B	06-24-2003	0730 JJ
Anions	4.9	----	meq/l	-----	07-02-2003	1230 SJ
Calcium, Dissolved	65.300	0.05	mg/l	EPA 200.7	06-26-2003	0930 BLP
Cations	4.9	----	meq/l	-----	07-02-2003	1230 SJ
Chloride	5	0.5	mg/l	EPA 300.0	06-20-2003	0900 JJ
Hardness, Total	253	----	mg/l as CaCO ₃	SM2340-B	07-02-2003	1230 SJ
Iron, Total	0.294	0.02	mg/l	EPA 200.7	06-24-2003	1230 BLP
Iron, Dissolved	<0.005	0.005	mg/l	EPA 200.7	06-26-2003	0930 BLP
Magnesium, Dissolved	21.800	0.02	mg/l	EPA 200.7	06-26-2003	0930 BLP
Manganese, Total	0.014	0.005	mg/l	EPA 200.7	06-24-2003	1230 BLP
Manganese, Dissolved	<0.005	0.005	mg/l	EPA 200.7	06-26-2003	0930 BLP
Oil & Grease	<2	2	mg/l	EPA 413.1	07-01-2003	0710 JJ
Potassium, Dissolved	1.390	0.5	mg/l	EPA 200.7	06-26-2003	0930 BLP
Sodium, Dissolved	3.510	0.1	mg/l	EPA 200.7	06-26-2003	0930 BLP
Solids, Settleable	<0.1	0.1	ml/l	EPA 160.5	06-20-2003	1430 DI
Solids, Total Dissolved	289	10	mg/l	EPA 160.1	06-23-2003	0110 AB
Solids, Total Suspended	25	5	mg/l	EPA 160.2	06-23-2003	0110 AB
Sulfate	36	0.5	mg/l	EPA 300.0	06-20-2003	0900 JJ
Cation/Anion Balance	3.3	----	%		07-02-2003	1230 SJ



Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Huntington Laboratory

Commercial Testing & Engineering Co. Minerals Services - Corporate Office
1919 S. Highland Ave., Suite 210B, Lombard, IL 60148 t(630) 953-9300 f(630) 953-9306 www.sgs.com

Member of the SGS Group (Société Générale de Surveillance)



ADDRESS ALL CORRESPONDENCE TO:
 COMMERCIAL TESTING & ENGINEERING CO.
 P.O. BOX 1020
 HUNTINGTON, UT 84528
 TEL: (435) 653-2311
 FAX: (435) 653-2436

July 2, 2003

HIDDEN SPLENDOR RESOURCES INC.
 57 WEST 200 SOUTH, SUITE 400
 SALT LAKE CITY UT. 84101
 DAVID MILLER

Sample identification by
 HIDDEN SPLENDOR RESOURCES

ID: MV-2

Kind of sample Water
 reported to us

RECEIVED 1145
 SAMPLED 0800

Sample taken at HORIZON MINE

FIELD MEASUREMENTS
 FLOW 1140 TEMP 10
 COND. 585 pH 8.1
 D.O. 4

Sample taken by D. MILLER

NOTES:
 DIS. METALS
 FILTERED @ LAB

Date sampled June 19, 2003

Date received June 19, 2003

Page 1 of 1

Analysis report no. 59-25332

Parameter	Result	MRL	Units	Method	Analyzed	
					Date/Time	Analyst
Alkalinity, Bicarbonate	291	5	mg/l	as HCO ₃ SM 2320 B	06-24-2003	0730 JJ
Alkalinity, Carbonate	<5	5	mg/l	as CO ₃ SM 2320 B	06-24-2003	0730 JJ
Alkalinity, Total	242	5	mg/l	as CaCO ₃ SM 2320 B	06-24-2003	0730 JJ
Anions	6.6	----	meq/l	-----	07-02-2003	1230 SJ
Calcium, Dissolved	76.200	0.05	mg/l	RPA 200.7	06-26-2003	0930 BLP
Cations	6.6	----	meq/l	-----	07-02-2003	1230 SJ
Chloride	8	0.5	mg/l	EPA 300.0	06-20-2003	0900 JJ
Hardness, Total	314	----	mg/l	as CaCO ₃ SM2340-B	07-02-2003	1230 SJ
Iron, Total	0.596	0.02	mg/l	EPA 200.7	06-24-2003	1230 BLP
Iron, Dissolved	<0.005	0.005	mg/l	EPA 200.7	06-26-2003	0930 BLP
Magnesium, Dissolved	30.000	0.02	mg/l	EPA 200.7	06-26-2003	0930 BLP
Manganese, Total	0.046	0.005	mg/l	EPA 200.7	06-24-2003	1230 BLP
Manganese, Dissolved	0.006	0.005	mg/l	EPA 200.7	06-26-2003	0930 BLP
Oil & Grease	<2	2	mg/l	EPA 413.1	07-01-2003	0710 JJ
Potassium, Dissolved	2.990	0.5	mg/l	EPA 200.7	06-26-2003	0930 BLP
Sodium, Dissolved	6.100	0.1	mg/l	EPA 200.7	06-26-2003	0930 BLP
Solids, Settleable	<0.1	0.1	ml/l	EPA 160.5	06-20-2003	1430 DI
Solids, Total Dissolved	363	10	mg/l	EPA 160.1	06-23-2003	0110 AB
Solids, Total Suspended	36	5	mg/l	EPA 160.2	06-23-2003	0110 AB
Sulfate	76	0.5	mg/l	EPA 300.0	06-20-2003	0900 JJ
Cation/Anion Balance	0.3	----	%		07-02-2003	1230 SJ



Respectfully submitted,
 COMMERCIAL TESTING & ENGINEERING CO.

Huntington Laboratory

Commercial Testing & Engineering Co. Minerals Services - Corporate Office
 1818 S. Highland Ave., Suite 210B, Lombard, IL 60148 t (630) 953-9300 f (630) 953-9306 www.sgs.com

Member of the SGS Group (Société Générale de Surveillance)

**NORTH FORK GORDON CREEK
MACROINVERTEBRATE
SAMPLING RESULTS
FROM FALL, 2003**

Submitted to:

Hidden Splendor Resources, Inc.
Horizon Mine
12530 Consumer Road
Helper, Utah 84526

Submitted by:

JBR Environmental Consultants, Inc.
8160 South Highland Drive
Sandy, UT 84093

February 2004

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NORTH FORK GORDON CREEK MACROINVERTEBRATE SAMPLING RESULTS FROM FALL, 2003

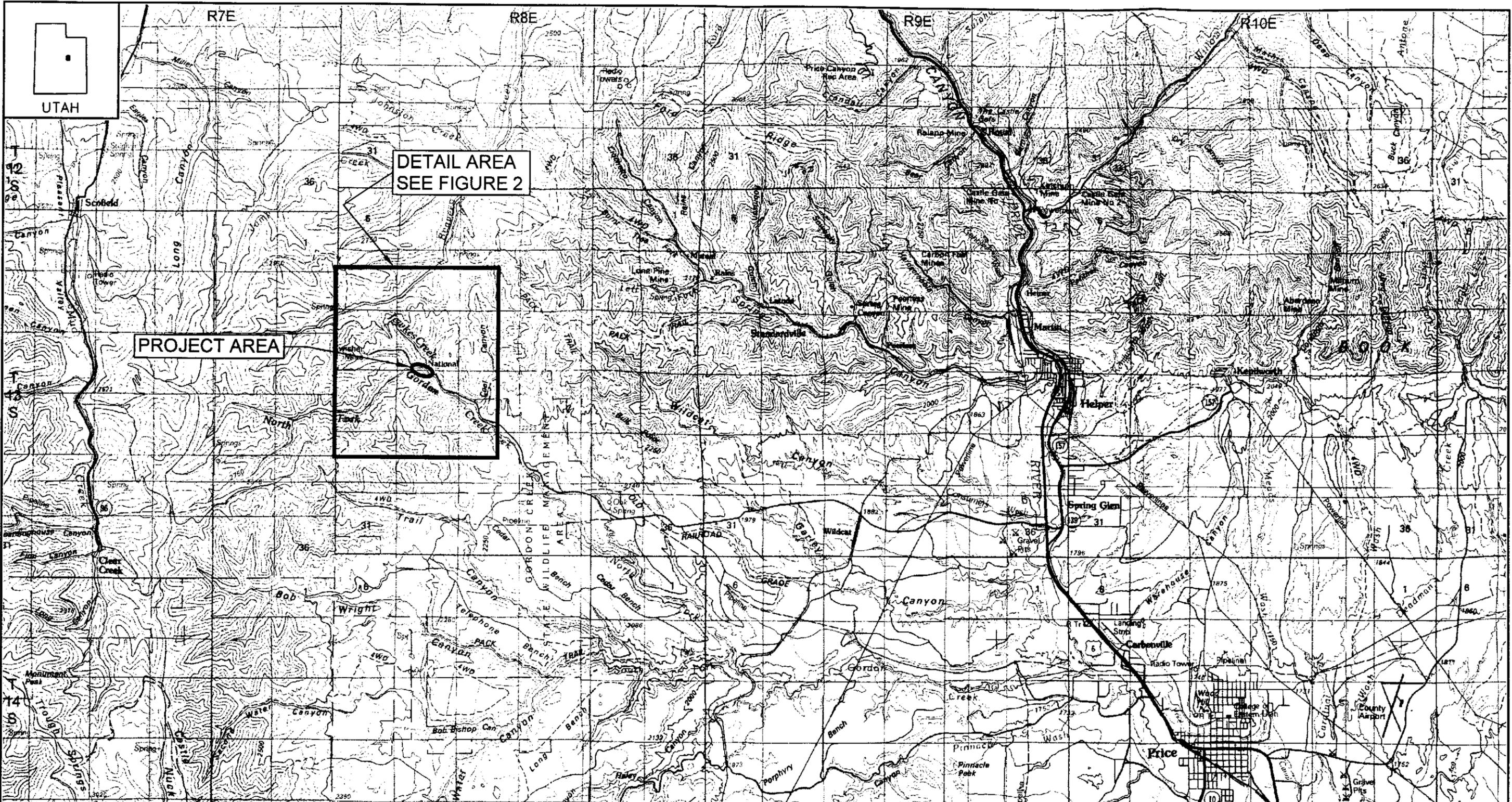
1.0 Introduction

The Hidden Splendor Mine is located south of Scofield, Utah (Figure 1), and its surface facilities are in the Jewkes Creek watershed. Jewkes Creek is tributary to North Fork Gordon Creek. As described in more detail in a previous report (JBR, 2001), the Jewkes Creek watershed is also subject to non-mining land uses including grazing and logging. The Hidden Splendor Mine discharges pumped groundwater into Jewkes Creek, approximately 0.5 road miles upstream of Jewkes Creek's confluence with North Fork Gordon Creek.

In the spring of 2001, Utah Division of Oil, Gas, and Mining (UDOGM) requested that a former operator of the coal mine initiate a macroinvertebrate data collection program that could be used to track temporal and spatial differences in habitat quality in North Fork Gordon Creek above and below its confluence with Jewkes Creek. Hidden Splendor has taken on the study as a condition of its mining permit. JBR Environmental Consultants (JBR) was hired originally to conduct the study, and UDOGM provided input on sampling locations and study design. JBR is continuing to conduct the study on Hidden Splendor's behalf.

Station 1 is located on North Fork Gordon Creek approximately 0.2 road miles upstream from the confluence of Jewkes Creek and Gordon Creek. Station 2 is located on North Fork Gordon Creek approximately 0.1 road miles downstream from the confluence of Jewkes Creek and Gordon Creek (Figure 2). Sites are sampled biannually, in spring and fall.

JBR first sampled the two chosen study sites on May 31, 2001, and prepared a report for the mine operator at that time (JBR, 2001). That sampling showed slightly better habitat conditions at the upstream site than the downstream site (JBR, 2001). Since that time, repeat sampling has shown either somewhat better conditions at the upstream site, or that the sites were essentially equal in condition. The two sites were most recently sampled on October 14, 2003; results are discussed in this report.



BASE: NEPHI AND PRICE, 1:100,000 USGS MAPS

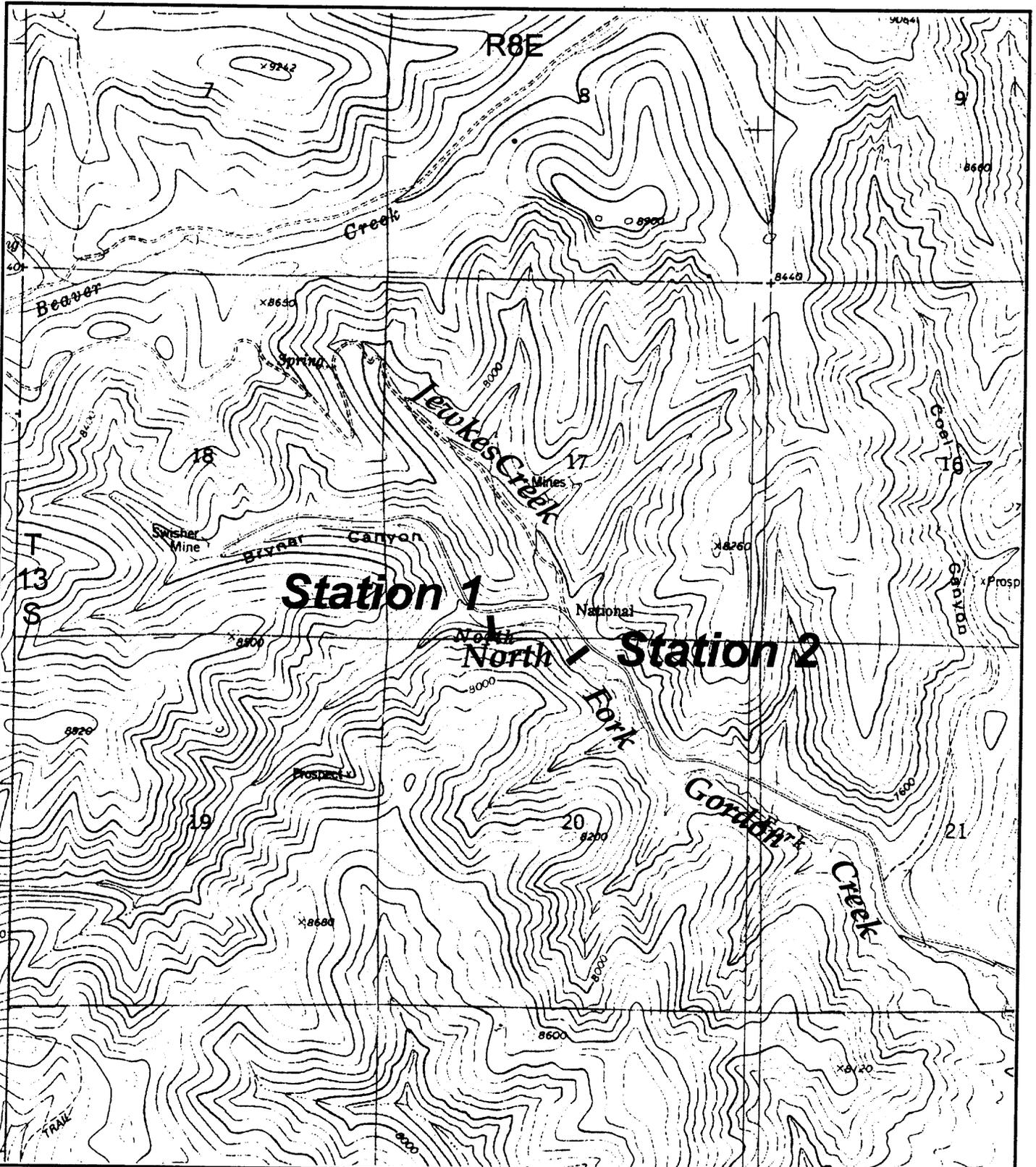


HIDDEN SPLENDOR RESOURCES, INC.
HORIZON MINE

FIGURE 1
 PROJECT LOCATION MAP

Jbr environmental consultants, inc.				DATE DRAWN 10/4/01
DESIGN BY MJ	DRAWN BY CP	CHECKED BY CHD	SCALE 1:100,000	REVISIONS

LODESTAR_Loadstar1-2.dwg



BASE: JUMP CREEK, UTAH, USGS 7.5' TOPO, 1979

**HIDDEN SPLENDOR RESOURCES, INC.
HORIZON MINE**

**FIGURE 2
SITE MAP - MACRO INVERTEBRATE
SAMPLING LOCATIONS**

2000 0 2000 FEET



Jbr environmental consultants, inc. <small>Salt Lake City, Utah Ogden City, Utah Reno, Nevada Elko, Nevada Boise, Idaho</small>			DATE DRAWN 8/23/01
DESIGN BY MJ	DRAWN BY CP	CH'D BY	SCALE 1" = 2000'

LODESTAR\Loadstar1-1.dwg

2.0 Methods

The October 2003 macroinvertebrate sampling was conducted using the same methods as were used previously (JBR, 2001). Three separate sub-samples, or replicates, were collected at each station. A modified Surber sampler was placed in riffle areas in midstream flow at each site. After processing the substrate within the confines of the sampler, the contents of the net were transferred to a pan, debris was removed, a salt solution was used to wash the sample. The sample was then placed in a preserved bottle and transported to the entomology laboratory at Brigham Young University, where the macroinvertebrates were sorted, identified, counted and analyzed under the supervision of Dr. Richard W. Baumann.

3.0 Results

The entomology lab at Brigham Young University prepared a written report based upon their analyses of the submitted samples (Baumann, 2003). Several types of information were derived from the samples and were reported in tabular form in Baumann's report; these tables are contained in Appendix A. A complete list of taxa found at each station was prepared, including total numbers, biomass, and density (numbers/square meter). Further, species were categorized according to their trophic level (scrapers, shredders, collectors, filter feeders, and predators) and their tolerance quotient. The number of taxa (or richness) also relates to community composition (or diversity), and the Shannon-Weaver Diversity Index was used to indicate diversity. Data from Baumann's report are summarized below, and discussions of these data follow.

SUMMARY INFORMATION OF DATA FROM BAUMANN'S REPORT

Parameter	Stations	
	1	2
Total number of taxa	9	19
Density (mean number/square meter)	97	1274
Biomass (grams/square meter)	<0.1	3.2
(Diversity) Shannon Weaver Index = d	2.4	2.6
Average Community Tolerance Quotient=CTQa	86	72
Predicted Community Tolerance Quotient = CTQp	60	60
Percent of Predicted = BCI	70	83

As shown in the above summary table, the diversity is similar at the two sites, and similar to values from previous sampling. The number of taxa, the density, and the biomass were lower than the spring sampling from this year.

Various tolerance quotients were also derived from the sample data. A tolerance quotient relates to the ability of a given species to withstand stressors such as poor water quality, high sediment levels, and extremes in water temperature; taxa have differing abilities to respond to various stressors or environmental conditions. Species with low tolerances are considered to be more fragile taxa, and can typically only be found in locations with relatively high quality that do not have environmental stressors present. The Actual Community Tolerance Quotients (CTQa) given above are simply arithmetic means of the tolerance quotients of the sampled macroinvertebrates. The upstream site had a CTQa of 86, and the downstream site had a value of 72. These were higher than usual, particularly for the upstream site. However, some species with low tolerances were identified at both sites, more particularly at the downstream site.

Still another measurement, the predicted Community Tolerance Quotient (CTQp), is the mean of the tolerance quotients for a predicted macroinvertebrate

community, and represents the ideal tolerance quotient mean for a community in a given area. The ratio of the CTQp to the °CTQa is known as the Biotic Condition Index, or BCI. It provides an indication of how close to its potential a particular stream site is, given the existing stream and watershed conditions. BCIs of 70 and 83 for the upstream and downstream sites, respectively, both indicate fair and good habitat conditions, respectively. Both showed decreases over the Spring 2003 sampling results.

For the first time, site conditions, based on the CTQa and the BCI, appeared better at the downstream site than at the upstream. Other indices also indicate at least somewhat better habitat conditions downstream than upstream, though generally decreased over previous sampling results. Field notes taken during the October sampling indicate noticeably colder water temperatures at the upstream site. Further, the mine discharge water that normally contributes a significant quantity of stream flow between the two sites had been temporarily halted. Dr. Baumann suggests that the stream bed at the upper station must have experienced a major reduction in water flow for a short period of time. There is no definitive information to confirm or deny this conclusion.

4.0 Summary

The October 2003 macroinvertebrate sampling at two sites on North Fork Gordon Creek appears to show somewhat better habitat quality at the downstream site than the upstream site. Future sampling and/or more intensive statistical analysis could provide additional data to further characterize the macroinvertebrate communities at these two locations.

5.0 References

Baumann, Richard W., December 2003. *Macroinvertebrate Studies on Gordon Creek, West of Helper, Carbon County, Utah - Samples Collected October 14, 2003*. Department of Zoology, Brigham Young University, Provo, Utah. Prepared for, and submitted to, JBR Environmental Consultants.

JBR Environmental Consultants, October 8, 2001. *North Fork Gordon Creek Macroinvertebrate Sampling Results From Spring, 2001*.

Appendix A

Data Tables From Baumann's Report

Table 1. Macroinvertebrates obtained from North Fork, Gordon Creek, Carbon County, Utah, samples collected October 14 2003

Organism	Trophic Level*	Tolerance Quotient	Stations	
			1	2
Ephemeroptera (Mayflies)				
Baetis	C-G	72		1
Cinygmula	Shr	30	1	1
Drunella grandis	Shr	32		6
Ephemerella inermis	C-G	92		2
Plecoptera (Stoneflies)				
Isogenoides zionensis	Pred	30	2	2
Isoperla quinquepunctata	Pred	48		4
Isoperla fulva	Pred	48		2
Trichoptera (Caddisflies)				
Brachycentrus americanus	Scr	54		142
Hydropsyche	C-F	108	2	68
Hesperophylax	Scr	108		2
Limnephilus	Scr	108	1	1
Coleoptera (Beetles)				
Stictotarsus				1
Elmidae	C-G	104	1	4
Diptera (Flies)				
Chironomidae	C-G	108	6	15
Dicranota	Pred	36		3
Hexatoma	Pred	36		1
Stratiomyidae	Pred	108		1
Tipula	Shr	80	1	44

Table 1 Continued				
Organism	Trophic Level*	Tolerance Quotient	Stations	
			1	2
Hirudinea (Leeches)	Pred	108	1	.
Crustacea (Scuds)				
Gammarus	C-G	98	12	55

*C-F = collectors-filterers
 C-G = collectors-gatherers
 Pred = predators

Scr = scrapers
 Shr = shredders

Table 2. Summary of macroinvertebrate data from North Fork, Gordon Creek, Carbon County, Utah, samples collected October 14, 2003

Parameter	Stations	
	1	2
Total number of taxa	9	19
Mean number/square meter	97	1274
Standard Deviation	114	98
Grams/square meter	<0.1	3.2
Dominance Community TQ=CTQd	87	75
Shannon Weaver Index = d	2.4	2.6
Average Community TQ=CTQa	86	72
Predicted Community TQ = CTQp	60	60
Percent of Predicted = BCI	70	83

BCI

Above 90
80-90
70-80
Below 70

SCALE

Excellent
Good
Fair
Poor

CTQd

Below 60
60-70
70-80
Above 80

SCALE

Excellent
Good
Fair
Poor

TOTAL SAMPLE STATISTICS

STATION: 1 Gordon Creek Upstream, Carbon Co., Utah

DATE: 10 14 03

Repl	Total No. Species	Mean /SQM	Confidence Limits (80 Percent)		Standard Deviation	Percent SE of Mean	Coeff. of Variation	DBAR	CTQA	CTQD
			LL	UL						
3	9	97	0	221	113.59	67.70	117.25	2.4390	86	87

SPECIES ANALYSIS

STATION: 1 Gordon Creek Upstream, Carbon Co., Utah

DATE: 10 14 03

TAXONOMIC LIST

CLASS	ORDER	FAMILY	GENUS	SPECIES	MEAN N/SQM	LOG10 N/SQM	LOG10 TQ	LOG10 XTQ
INSECTA	EPHEMEROPTERA	HEPTAGENIIDAE	Cinygmula		4	0.555	30	16
INSECTA	PLECOPTERA	PERLODIDAE	Isogenoides	Zionensis	7	0.856	30	25
INSECTA	TRICHOPTERA	HYDROPSYCHIDA	EHydropsyche		7	0.856	108	92
INSECTA	TRICHOPTERA	LIMNEPHILIDAE	Limnephilus		4	0.555	108	59
INSECTA	COLEOPTERA	ELMIDAE			4	0.555	104	57
INSECTA	DIPTERA	TIPULIDAE	Tipula		4	0.555	80	44
INSECTA	DIPTERA	CHIRONOMIDAE			22	1.333	108	143
HIRUDINEA					4	0.555	108	59
CRUSTACEA	AMPHIPODA	GAMMARIDAE	Gammarus		43	1.634	98	160

MEAN BIOMASS GM/SQM: 0.1

TOTALS: 97 1.986

TOTAL SAMPLE STATISTICS

STATION: 2

Gordon Creek Downstream, Carbon Co., Utah

DATE: 10 14 03

Total No. Repl Species	Mean /SQM	Confidence Limits (80 Percent)		Standard Deviation	Percent SE of Mean	Coeff. of Variation	DBAR	CTQA	CTQD
		LL	UL						
3	19	1274	1167 1381	98.33	4.46	7.72	2.5836	72	75

SPECIES ANALYSIS

STATION: 2 Gordon Creek Downstream, Carbon Co., Utah DATE: 10 14 03

TAXONOMIC LIST				MEAN LOG10	LOG10		
CLASS	ORDER	FAMILY	GENUS	SPECIES	N/SQM	N/SQM	TQ XTQ
INSECTA	EPHEMEROPTERA	HEPTAGENIIDAE	Cinygmula		4	0.555	30 16
INSECTA	EPHEMEROPTERA	EPHEMERELLIDAE	Ephemerella	Inermis	7	0.856	92 78
INSECTA	EPHEMEROPTERA	EPHEMERELLIDAE	Drunella	Grandis	22	1.333	32 42
INSECTA	EPHEMEROPTERA	BAETIDAE	Baetis		4	0.555	72 39
INSECTA	PLECOPTERA	PERLODIDAE	Isogenoides	Zionensis	7	0.856	30 25
INSECTA	PLECOPTERA	PERLODIDAE	Isoperla	Quinquepunctata	14	1.157	8 55
INSECTA	PLECOPTERA	PERLODIDAE	Isoperla	Fulva	7	0.856	48 41
INSECTA	TRICHOPTERA	HYDROPSYCHIDAE	Hydropsyche		244	2.387	108 257
INSECTA	TRICHOPTERA	BRACHYCENTRIDAE	Brachycentrus	Americanus	509	2.707	54 146
INSECTA	TRICHOPTERA	LIMNEPHILIDAE	Limnephilus		4	0.555	108 59
INSECTA	TRICHOPTERA	LIMNEPHILIDAE	Hesperophylax		7	0.856	108 92
INSECTA	COLEOPTERA	ELMIDAE			14	1.157	104 120
INSECTA	COLEOPTERA	DYTISCIDAE	Stictotarsus		4	0.555	72 39
INSECTA	DIPTERA	TIPULIDAE	Dicranota		11	1.032	36 37
INSECTA	DIPTERA	TIPULIDAE	Hexatoma		4	0.555	36 19
INSECTA	DIPTERA	TIPULIDAE	Tipula		158	2.198	80 175
INSECTA	DIPTERA	CHIRONOMIDAE			54	1.731	108 186
INSECTA	DIPTERA	STRATIOMYIDAE			4	0.555	108 59
CRUSTACEA	AMPHIPODA	GAMMARIDAE	Gammarus		197	2.295	98 224
		MEAN BIOMASS GM/SQM: 3.2	TOTALS:		1274	3.105	



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October 23, 2003

HIDDEN SPLENDOR RESOURCES INC.
57 WEST 200 SOUTH, SUITE 400
SALT LAKE CITY UT. 84101
DAVID MILLER

Sample identification by
HIDDEN SPLENDOR RESOURCES

ID: MV-1

Kind of sample Water
reported to us

Sample taken at HORIZON MINE

Sample taken by K.P.

Date sampled October 16, 2003

Date received October 16, 2003

RECEIVED 1245
SAMPLED 0850

FIELD MEASUREMENTS

FLOW 25 TEMP 3
COND. 640 pH 8.70
D.O. 8

NOTES:
DIS. METALS
FILTERED @ LAB

Page 1 of 1

Analysis report no. 59-25812

Parameter	Result	MRL	Units	Method	Analyzed		
					Date/Time	Analyst	
Alkalinity, Bicarbonate	340	5	mg/l as HCO ₃	EPA 310.1	10-21-2003 0925	JJ	
Alkalinity, Carbonate	<5	5	mg/l as CO ₃	EPA 310.1	10-21-2003 0925	JJ	
Alkalinity, Total	279	5	mg/l as CaCO ₃	EPA 310.1	10-21-2003 0925	JJ	
Anions	7.8	----	meq/l	-----	10-23-2003 1030	SJ	
Calcium, Dissolved	86.000	0.05	mg/l	EPA 200.7	10-21-2003 1606	DI	
Cations	7.7	----	meq/l	-----	10-23-2003 1030	SJ	
Chloride	9	1	mg/l	EPA 300.0	10-17-2003 1315	JJ	
Hardness, Total	368	----	mg/l as CaCO ₃	SM2340-B	10-23-2003 1030	SJ	
Iron, Dissolved	<0.005	0.005	mg/l	EPA 200.7	10-21-2003 1606	DI	
Iron, Total	0.039	0.020	mg/l	EPA 200.7	10-21-2003 1126	DI	
Magnesium, Dissolved	37.300	0.02	mg/l	EPA 200.7	10-21-2003 1606	DI	
Manganese, Total	0.008	0.005	mg/l	EPA 200.7	10-21-2003 1126	DI	
Manganese, Dissolved	0.007	0.005	mg/l	EPA 200.7	10-21-2003 1606	DI	
Oil & Grease	<2	2	mg/l	EPA 413.1	10-22-2003 0900	DI	
Potassium, Dissolved	2.560	0.5	mg/l	EPA 200.7	10-21-2003 1606	DI	
Sodium, Dissolved	5.300	0.1	mg/l	EPA 200.7	10-21-2003 1606	DI	
Solids, Settleable	<0.1	0.1	ml/l	EPA 160.5	10-17-2003 0945	BLP	
Solids, Total Dissolved	384	30	mg/l	EPA 160.1	10-20-2003 0815	DI	
Solids, Total Suspended	<5	5	mg/l	EPA 160.2	10-20-2003 0815	DI	
Sulfate	97	1	mg/l	EPA 300.0	10-17-2003 1315	JJ	
Cation/Anion Balance	-1.2	----	%		10-23-2003 1030	SJ	

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Huntington Laboratory



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October 23, 2003

HIDDEN SPLENDOR RESOURCES INC.
57 WEST 200 SOUTH, SUITE 400
SALT LAKE CITY UT. 84101
DAVID MILLER

Sample identification by
HIDDEN SPLENDOR RESOURCES

ID: MV-2

Kind of sample Water
reported to us

RECEIVED 1245
SAMPLED 0910

Sample taken at HORIZON MINE

FIELD MEASUREMENTS
FLOW 380 TEMP 9
COND. 690 pH 8.60
D.O. 6

Sample taken by K.P.

NOTES:
DIS. METALS
FILTERED @ LAB

Date sampled October 16, 2003

Date received October 16, 2003

Page 1 of 1

Analysis report no. 59-25814

Parameter	Result	MRL	Units	Method	Analyzed	
					Date/Time/Analyst	
Alkalinity, Bicarbonate	355	5	mg/l as HCO ₃	EPA 310.1	10-21-2003 0925	JJ
Alkalinity, Carbonate	<5	5	mg/l as CO ₃	EPA 310.1	10-21-2003 0925	JJ
Alkalinity, Total	295	5	mg/l as CaCO ₃	EPA 310.1	10-21-2003 0925	JJ
Anions	8.8	----	meq/l	-----	10-23-2003 1030	SJ
Calcium, Dissolved	92.700	0.05	mg/l	EPA 200.7	10-21-2003 1606	DI
Cations	8.2	----	meq/l	-----	10-23-2003 1030	SJ
Chloride	10	1	mg/l	EPA 300.0	10-17-2003 1315	JJ
Hardness, Total	386	----	mg/l as CaCO ₃	SM2340-B	10-23-2003 1030	SJ
Iron, Dissolved	<0.005	0.005	mg/l	EPA 200.7	10-21-2003 1606	DI
Iron, Total	0.345	0.020	mg/l	EPA 200.7	10-21-2003 1126	DI
Magnesium, Dissolved	37.600	0.02	mg/l	EPA 200.7	10-21-2003 1606	DI
Manganese, Total	0.063	0.005	mg/l	EPA 200.7	10-21-2003 1126	DI
Manganese, Dissolved	0.043	0.005	mg/l	EPA 200.7	10-21-2003 1606	DI
Oil & Grease	<2	2	mg/l	EPA 413.1	10-22-2003 0900	DI
Potassium, Dissolved	4.980	0.5	mg/l	EPA 200.7	10-21-2003 1606	DI
Sodium, Dissolved	9.020	0.1	mg/l	EPA 200.7	10-21-2003 1606	DI
Solids, Settleable	<0.1	0.1	ml/l	EPA 160.5	10-17-2003 0945	BLP
Solids, Total Dissolved	448	30	mg/l	EPA 160.1	10-20-2003 0815	DI
Solids, Total Suspended	13	5	mg/l	EPA 160.2	10-20-2003 0815	DI
Sulfate	128	1	mg/l	EPA 300.0	10-17-2003 1315	JJ
Cation/Anion Balance	-3.1	----	%		10-23-2003 1030	SJ

Respectfully submitted,
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